RESEARCH SUMMARY

Jan. 1993 RS–009

forest sciences
NELSON FOREST REGION

A Quick Tour of the SYTEPREP Decision Aid

*M.P. Curran and M.M. Johnston**

- Print data using pull-down menu F7 and then selecting options under Print submenu
- The function-key template (see back of user manual) makes navigating through the system easier

SYTEPREP
DECISION AID

INTRODUCTION

The objective of SYTEPREP is to predict the ecological effects of various site preparation treatments and thereby assist users in deciding on a "biologically appropriate" treatment.

An overview of the system is described in RS-006. The objective of this research summary is to summarize briefly how the SYTEPREP system is installed on a computer and how it is used. The principal features of the SYTEPREP user interface (look and feel of the system) are described as the user is led through a sample run of the system.

COMPUTER/DATA NEEDS

Computer:
- 520 K RAM (memory) free
- hard drive with 3.5 Mb of free disk space
- EGA or VGA graphics (colour monitor)

Data:
- PHSP level info. (if you want to see predictions of system on your own site)

Software:
- SYTEPREP disk (ver. .9e or later)

INSTALLING THE SYSTEM (about 2 min.)

Starting at C:\ prompt:

Put diskette in floppy drive and type the following (Press **Enter** after each line):

MD \SYTEPREP *(to make directory on hard drive)*
CD \SYTEPREP *(to switch to directory)*
COPY A:*.* *(to copy diskette to C: drive directory)*
RUNME *(to uncompress the program)*
DEL SYTEPREP.ZIP *(to delete compressed file)*

RUNNING THE SYSTEM (as short as 2 min.)

Once in the directory, type **SYTEPREP** + **Enter** (to run the program)

Press **F10** to move forward from screen to screen; **F9** to go backwards. On data-input screens (i.e. screens that have a status bar on bottom - see Fig. 1), press **Tab** to skip from field to field; **Shift-Tab** to go backwards; **F1** for field Help; and **Enter** to display field menu (if applicable).

Users can also use "hot-keys" (e.g **Alt-G** to go to graph) or the pull-down menu system (**F7**) to navigate through the system.

DATA ENTRY

Press **F10** several times to skip to screen titled "SPECIFY FILE INFORMATION".
Press **Enter** twice to select the example "MURPHY" file which contains information on the Murphy Creek research site near Rossland.
Press **F10** several more times to skip to screen titled "QUICK DATA FORM".

The "Quick Data" module provides two screen forms where existing data may be modified or new data entered. (You may enter your own data now or simply look at the Murphy data). White fields need to be filled out by the user. Coloured fields show system output information. A box on the upper right hand corner of all input screens tells the user what type of information to fill in (e.g. *SELECT FROM MENU* or *ENTER NUMBER* - see Fig. 1).

Three main opportunities exist for the user to learn more about the information being requested: 1) introductory screens at the beginning of each module, 2) **F1** for field help and 3) "Hot-Keys" such as **Alt-V** that access other input screens. For example, with vegetation, if you do not know about the vegetation complexes expected, you may go to the vegetation module to read about them. Use **Alt-V** to go to the module and press **Enter** twice to select the complex you want to know more about. (Use **Alt-Q** to return to the Quick Data Form, see Fig. 2.)

* Michael Johnston is a systems consultant for the B.C. Ministry of Forests

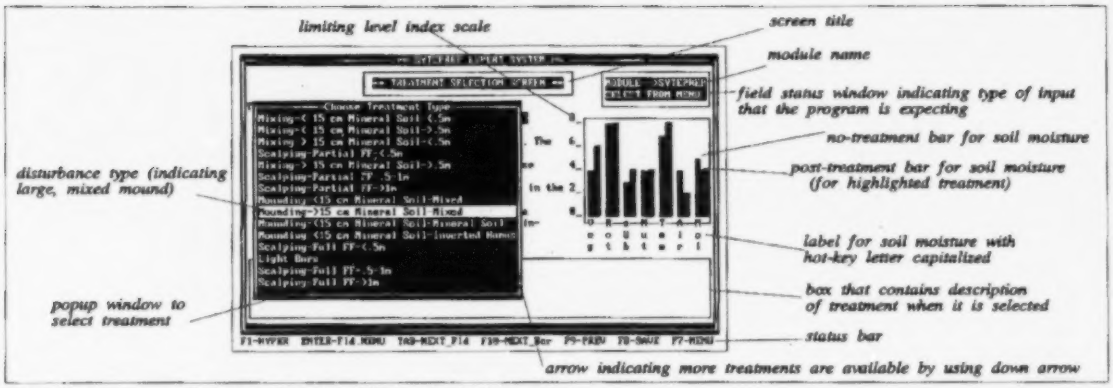
limiting level index scale
screen title
module name
field status window indicating type of input that the program is expecting
no-treatment bar for soil moisture
post-treatment bar for soil moisture (for highlighted treatment)
label for soil moisture with hot-key letter capitalized
box that contains description of treatment when it is selected
status bar
arrow indicating more treatments are available by using down arrow
disturbance type (indicating large, mixed mound)
popup window to select treatment

Figure 1 Screen snapshot of treatment ranking and selection screen

For now, don't worry about changing any data on the screen or using any of the "hot-keys". Instead, press the **F10** key several times to advance to the Treatment Ranking and Selection Module.

RANKING AND VIEWING TREATMENT EFFECTS

To help the user focus on the main disturbance types that may be most beneficial, SYTEPREP provides a crude ranking of possible disturbance types.

Press **F4** on the screen titled "TREATMENT PARAMETERS" to rank order the treatments.
Press **F10** then **Enter** to display a crudely ranked list along with a mini-graph of growth limiting factor levels (see Fig. 1).

The user can then browse up and down the list (observing how the possible treatments affect the graph) and select treatments to explore in more detail or print.

Select a treatment by moving the highlight bar and pressing **Enter**.
The treatment can be examined in detail by successively pressing **(F10)** or by using the hot-key for a module of interest (e.g. **Alt-V**). Use the "hotkey" **Alt-G** (see Fig. 2) to jump to the 3-D bar graph, when desired.
Try changing a data or treatment parameter (**Alt-Q** or **Alt-L** to jump to the respective screens) and then re-graph using **Alt-G** after changing the parameter.

The FIREFFEC and MSPEFFEC subsystems provide the detailed information concerning each treatment. This includes a modified Prescribed Fire Predictor for slashburn impact prediction, mechanical soil disturbance type definitions, and individual modules describing each growth limiting factor.

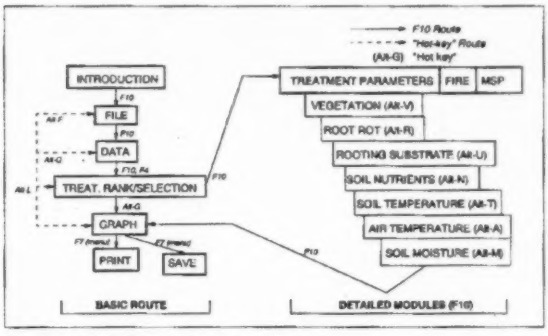

Figure 2 SYTEPREP system structure

LIMITING LEVEL BAR GRAPH

The limiting level 3-D bar graph at the end of the detailed screens summarizes whether a treatment is expected to produce a net negative or positive effect on seedling establishment. This information may also be printed so the user can keep a record of his/her run. (Use **F7** menu as per sidebar on previous page).

MANAGEMENT GAMING

No decision is ever made for the user. Based on the crude rankings, different treatments can be compared to the "No-Treatment" option that must always be considered. The user can quickly change a parameter (eg. restocking species) and re-graph the limiting factors in as little as 15 seconds. Note that current treatment rankings (but not 3-D bar graph) become invalid if the user changes a data parameter other than treatment type – this takes as little as 15 seconds longer to re-rank. It is this powerful feature of SYTEPREP that enables true management gaming and critical thought regarding other considerations ("trade-offs") that must go into a site preparation prescription (eg. cost, soil sensitivity, equipment needed to create disturbance type, etc.)

After finishing your management gaming, press **F8** to save the data parameters (if desired) and **Alt-X** to exit the system.

Users are cautioned that the SYTEPREP decision aid is not designed to replace common sense, and local experience, but rather to encourage critical thinking and discussion during development or review of a prescription.

SYSTEM WORKSHOPS

Although the system is considered user-friendly, participating in a system workshop is the best way to become familiar with the strengths and limitations of the system. At these workshops the user is able to try the system on sites of their own choosing.

FEEDBACK, PLEASE

Because SYTEPREP is being developed for operational use, feedback is very important to successful implementation. A questionnaire has been sent to local users, and any other comments or suggestions are always welcome. Operational usefulness and scientific merit will be reviewed regularly.

For more information contact:

Mike Curran, Research Pedologist, Nelson Forest Region,
(604) 354-6702 E-Mail MCURRAN